

under 35 U.S.C. § 103 of the August 24, 2001 Office Action. The May 8, 2002 rejection was made final. In the most recent Office Action, the Examiner indicated that "the claimed invention does not distinguish Tsumura at least because the claims do not recite a 'predetermined time' or 'period of time.'" Claim 7 was rejected under 35 U.S.C. § 112 ¶ 2. Claim 7 was also rejected under 35 U.S.C. § 103 further in view of Burke. In accordance with 37 CFR 1.116, Applicant has canceled claims 1-4 and 7 and respectfully requests consideration of new claims 8-11, which it is submitted overcome the rejections of the original claims.

New claim 8 specifies a three-phase process comprised of an initial mix fill phase followed by a react fill phase followed by a react discharge phase. Applicant notes the Examiner's comment that the invention as claimed in now-canceled claims 1-4 and 7

does not distinguish over Tsumura at least because the claims do[] not recite a 'predetermined time' or 'period of predetermined duration.' This remark[] also addresses Applicant's remarks pertaining to claim[s] 2-4, to wit, that the invention regulates process steps "strictly as a function of time. This feature does not limit the claims since it is not recited therein.

(5/18/02 Office Action, at 2-3).

New claims 8-11 distinguish over Tsumura and the other prior art of record because the claims specifically require that each of the mix fill, react fill and react discharge phases has a predetermined duration. Moreover, the claims specifically require that each phase (except for the liquid/solids separation portion of the react discharge phase) take place in a single vessel. The


prior art of record teaches the use of two or more vessels to accomplish water treatment steps prior to liquid/solids separation. For example, Tsumura teaches the use of a first aeration tank, a separate second aeration tank and a separate settling tank to accomplish these steps. See, e.g., Tsumura, col. 4 lines 43-46. Mandt also teaches the use of separate vessels or "zones."

Finally, claim 7 has been cancelled. Thus, the Examiner's rejections of that claim were obviated.

In light of the foregoing amendments, it is respectfully submitted that all of the pending claims are now in a condition for allowance. A clean version of the new claims is submitted herewith.

Respectfully submitted,

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New Claims: CLEAN VERSION

8. (New) A three-phase process for the treatment of wastewater comprising an initial mix fill phase having a predetermined duration in which wastewater is directed into a vessel containing an activated sludge, the wastewater is mixed with the activated sludge and the vessel environment is controlled to provide an initial anaerobic time period for achieving phosphorous release and denitrification of oxidized nitrogen in the vessel, followed by a react fill phase having a predetermined duration in which wastewater flow into the vessel continues and the wastewater is exposed to alternating periods of aeration and mixing only to promote completely mixed aerobic and anoxic conditions, followed by a react discharge phase having a predetermined duration in which wastewater flow into the vessel ceases, the wastewater is exposed to alternating periods of aerobic and anoxic conditions, and during this exposure to alternating periods of aerobic and anoxic conditions, the wastewater is directed to a membrane device to separate suspended solids in the wastewater from liquid.

9. (New) The process of claim 8 wherein the mix fill phase is completed in about 15 minutes.

10. (New) The process of claim 8 wherein the react fill phase is completed in about 45 minutes.

11. (New) The process of claim 8 wherein the react discharge phase is completed in about 60 minutes.